

**REMARKS****INTRODUCTION:**

In accordance with the foregoing, claim 7 has been canceled without prejudice or disclaimer, claims 1, 8, 9, and 10 have been amended, and claim 52 has been added. No new matter is being presented, and approval and entry are respectfully requested.

Claims 1-13, 46, 48, 50 and 52 are under consideration. Claims 14-45, 47, 49, and 51 are withdrawn. Reconsideration is respectfully requested.

**AMENDMENT OF CLAIMS 8-10:**

Since claims 8-10 depended from claim 7, and claim 7 was canceled, claims 8-10 were updated to depend from amended claim 1.

**REJECTION UNDER 35 U.S.C. §102:**

In the Office Action, at page 3-5, numbered paragraph 5, claims 1, 7, 8, 10, 12 and 13 were rejected under 35 U.S.C. §102(b) as being anticipated by Steinfield et al. (EP 1 153 749 A1; hereafter, Steinfield). This rejection is traversed and reconsideration is requested.

Claim 1 of the present invention has been amended to include the features of claim 7. Claim 7 has been cancelled without prejudice or disclaimer.

It is respectfully submitted that Steinfield teaches a mechanical feature that varies a local thickness of the flexible nozzle member wherein, as set forth in the Abstract, Steinfield: "The mechanical feature (450) can be defined in the flexible nozzle member (306) as extending in a range in close proximity to the ink channel (424) and the adhesive (432)." That is, the location of the mechanical feature of Steinfield is between the portion of the flexible nozzle member that is situated on adhesive that couples the flexible nozzle member to an outer support of the headland located proximate to the back surface of the nozzle member and the ink channel. The mechanical feature of Steinfield is illustrated in FIGs. 4-6 of Steinfield as a recess in the flexible nozzle member wherein the recess is located above the ink channel that is proximate to the headland. In contrast, amended claim 1 of the present invention recites "wherein the anti-curing-deformation part comprises at least one groove disposed in a longitudinal direction between rows of the nozzles of the nozzle plate" (emphasis added).

Hence, it is respectfully submitted that the anti-deformation part of amended claim 1 of the present invention is located in a different position than the mechanical feature of Steinfield, and thus, the anti-deformation part of amended claim 1 of the present invention operates differently to relieve stress in comparison with the mechanical feature of Steinfield, i.e., amended

claim 1 of the present invention provides stress relief in a different fashion than the mechanical feature of Steinfield because of the different location. Hence, Steinfield does not teach or suggest amended claim 1 of the present invention.

Thus, it is respectfully submitted that amended claim 1 of the present invention is not anticipated under 35 U.S.C. §102(b) by Steinfield et al. (EP 1 153 749 A1). Since claims 7, 8, 10, 12 and 13 depend from amended claim 1 of the present invention, claims 1, 7, 8, 10, 12 and 13 are not anticipated under 35 U.S.C. §102(b) by Steinfield et al. (EP 1 153 749 A1) for at least the reasons amended claim 1 is not anticipated under 35 U.S.C. §102(b) by Steinfield et al. (EP 1 153 749 A1).

### **REJECTION UNDER 35 U.S.C. §103:**

In the Office Action, at pages 6-10, numbered paragraph 7, claims 2-6, 9, 11, 46, 48 and 50 were rejected under 35 U.S.C. §103(a) as being unpatentable over Steinfield et al. (EP 1 153 749 A1; hereafter, Steinfield). The reasons for the rejection are set forth in the Office Action and therefore not repeated. The rejection is traversed and reconsideration is requested.

Claim 1 of the present invention has been amended to include the features of claim 7. Claim 7 has been cancelled without prejudice or disclaimer.

As noted above, Steinfield does not teach or suggest "wherein the anti-curing-deformation part comprises at least one groove disposed in a longitudinal direction between rows of the nozzles of the nozzle plate," as is recited in amended claim 1 of the present invention.

In addition, as admitted by the Examiner, Steinfield does not teach "wherein the nozzle plate is formed of a negative photo resist" of claim 2 of the present invention. The Examiner simply argues that he takes "Official Notice that in the photolithographic art, which provides a photo mask with nozzle pattern and together with a Negative photo resist process subjecting to e.g. UV light to develop into a nozzle plate." By taking Official Notice, the rejection is being based, in part, on the personal knowledge of the Examiner. The personal knowledge of the Examiner, when used as a basis for a rejection, must be supported by an affidavit as to the specifics of the facts of that knowledge when called for by the applicant. See, MPEP 2144.03, 37 C.F.R. § 1.104(d)(2). In short, the rules of the U.S. Patent and Trademark Office require that the Examiner must either support this assertion with an Affidavit, or withdraw the rejection. Therefore, it is further respectfully requested that the Examiner support the rejection of claim 2 with an affidavit, or withdraw the rejection of claim 2.

Further, the Examiner argues that claims 3-6 deal with materials utilized to make the monolithic bubble-ink jet print head, which could be selected by a worker. Applicant respectfully

submits that the Examiner's reason is deficient. Steinfield does not address selection of materials for a negative photo resist, for example, "wherein the negative photo resist comprises a photosensitive polymer selected from a group including a resin of an epoxy group, a resin of a polyimide group, and a resin of a polyacrylate group," as is recited in claim 3 of the present invention. Also, Steinfield does not teach or suggest utilizing a nozzle plate formed of a thermosetting polymer, as is recited in claim 4 of the present invention, or that the thermosetting polymer may comprise one of a polymer of an epoxy group, a polymer of a polyimide group, and a polymer of a polyacrylate group, as is recited in claim 5 of the present invention. Steinfield recites, in paragraph [0032], "the flexible nozzle member 306 and the headland 426 are typically made of different materials." Hence, Steinfield teaches away from claim 6 of the present invention, which recites, in part: "wherein the chamber plate and the nozzle plate are formed in a body using a same material." Thus, the Examiner's reasoning that "it would have been within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use" appears to use hindsight by focusing on what is taught by the present claimed invention. Hence, claims 3-6 are submitted to be patentable under 35 U.S.C. §103(a) over Steinfield et al. (EP 1 153 749 A1).

The Examiner admitted that Steinfield does not teach claim 9 of the present invention. The Examiner's submission that the use of at least two grooves overlooks the fact that the grooves of the present invention are positioned in a different location than the mechanical feature of Steinfield, and hence operate to relieve stress in a different fashion than Steinfield. Hence, the Examiner's arguments regarding a multiplicity of a feature fail to apply to claim 9 of the present invention. Hence, claim 9 is submitted to be patentable under 35 U.S.C. §103(a) over Steinfield et al. (EP 1 153 749 A1).

The Examiner rejected claims 11, 46, 48, and 50 in a similar fashion as to his rejection of claims 3-6. For similar reasons recited above for claims 3-6, claims 11, 46, 48, and 50 are submitted to be patentable under 35 U.S.C. §103(a) over Steinfield et al. (EP 1 153 749 A1).

Further, amended claim 1 is not taught or suggested by Steinfield, as noted above, wherein differences are noted. Hence, amended claim 1 is submitted to be patentable under 35 U.S.C. §103(a) over Steinfield et al. (EP 1 153 749 A1). Since claims 2-6, 9, 11, 46, 48 and 50 depend from amended claim 1, claims 2-6, 9, 11, 46, 48 and 50 are patentable under 35 U.S.C. §103(a) over Steinfield et al. (EP 1 153 749 A1) for at least the reasons amended claim 1 of the present invention is patentable under 35 U.S.C. §103(a) over Steinfield et al. (EP 1 153 749 A1).

**CONCLUSION:**

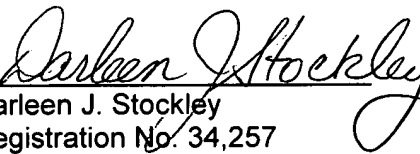
In accordance with the foregoing, it is respectfully submitted that all outstanding objections and rejections have been overcome and/or rendered moot, and further, that all pending claims patentably distinguish over the prior art. Thus, there being no further outstanding objections or rejections, the application is submitted as being in condition for allowance which action is earnestly solicited.

If the Examiner has any remaining issues to be addressed, it is believed that prosecution can be expedited by the Examiner contacting the undersigned attorney for a telephone interview to discuss resolution of such issues.

If there are any underpayments or overpayments of fees associated with the filing of this Amendment, please charge and/or credit the same to our Deposit Account No. 19-3935.

Respectfully submitted,

STAAS & HALSEY LLP

Date: September 12, 2006 By:   
Darleen J. Stockley  
Registration No. 34,257

1201 New York Avenue, N.W.  
Suite 700  
Washington, D.C. 20005  
Telephone: (202) 434-1500  
Facsimile: (202) 434-1501